Science Curriculum

Rationale

All students, regardless of different abilities, needs and interests, must to be able to use science in their everyday lives. We need science to understand and evaluate our personal health, the environment, and resource management. Students are naturally curious. They should have enhanced opportunities to develop science skills through engagement in actively constructing ideas and forming explanations. Science assists students to fulfill personal ambitions and career goals in an ever-changing world. The science curriculum requires participation in learning and is connected to other curriculum areas. Science helps students learn to use technology and generalize it into the community. Through science students will have a better understanding of the world around them and the impact they have on that world.

Purpose

Students with severe disabilities are able to build on the following long-range outcomes through the science curriculum:

- Use direct observation or personal experience to solve problems or complete tasks
- Use tools in daily living, vocational and leisure environments
- Determine appropriate clothing for the weather
- Practice safety measures during all weather conditions
- Care for themselves and their environment
- · Recognize dangers in the environment and demonstrate safety skills
- Understand time concepts in relation to a daily routine
- Use information about living things to take care of plants, pets, and to maintain a healthy lifestyle
- Learn how to conserve resources in all environments.



Grades Science K - 5

Show-Me Standard: SC1 properties and principles in matter and energy.

Alternate Framework Standard: FSC-1 Using the senses to detect physical properties: sorting,

observing, and responding to changes; observing and using

properties and effects of heat and light.

Graduate Goal 4: All graduates will use direct observation or personal experience to solve a problem or complete a task.

Graduate Goal 5: All graduates will follow an object, picture, symbol, or a written routine.

What All Students Should Know	What All Students Should be Able to Do	Learning Activities
By the end of 5 th grade the student will: Use the senses to discriminate between items. React to hot and cold temperatures.	By the end of 5 th grade the student will: Goal 3 F-6 Participate in activities that provide opportunities for solving problems by developing solutions based on differing perspectives. Goal 3 F-8 Make connections between an action and its consequences. Goal 4 F-7 Identify and apply practices that preserve and enhance the safety and health of self and others.	TEACH Manual: Vol. I Hot Chocolate, Winter Clothes, Globe Toss Vol. III C-19, I-11, L-7 Computer Assisted Instruction: Think'n Things® Get Ready for School Charlie Brown Just Grandma & Me Assistive Technology: Touch Window IntelliKeys®



Show-Me Standard: SC1 properties and principles in matter and energy.

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observing, and responding to changes; observing and using

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Graduate Goal 4 All graduates will use direct observation or personal experience to solve a problem or

complete a task.

Graduate Goal 5 All graduates will follow an object, picture, symbol, or a written routine.

What All Students Should Know	What All Students Should be Able to Do	Learning Activities
By the end of 8 th grade the student will: Use senses to determine if food spoiled or to recognize noxious odors in the various environments. Recognize seasonal changes. Recognize daytime/night.	By the end of 8 th grade the student will: Goal 3 F-6 Participate in activities that provide opportunities for solving problems by developing solutions based on differing perspectives. Goal 3 F-8 Make connections between an action and its consequences. Goal 4 F-7 Identify and apply practices that preserve and enhance the safety and health of self and others.	TEACH Manual: Vol. I Halloween Sensory Room, Winter Clothes, Globe Toss Vol. II The American Cowboy, Time for Safety Vol. III A-9, C-19, L-7 Computer Assisted Instruction: Get Ready for School Charlie Brown Assistive Technology: Touch Window IntelliKeys®



Grades Science 9 - 12 **Show-Me Standard**: SC1 properties and principles in matter and energy.

Alternate Framework Standard: FSC-1 Using the senses to detect physical properties: sorting,

observing, and responding to changes; observing and using properties and effects of heat and light.

Graduate Goal 4 All graduates will use direct observation or personal experience to solve a problem or

complete a task.

Graduate Goal 5 All graduates will follow an object, picture, symbol, or a written routine.

What All Students Should Know	What All Students Should be Able to Do	Learning Activities
By the end of 12 th grade the student will: Classify items using the senses. Be aware of weather conditions and adjust daily activities accordingly.	By the end of 12 th grade the student will: Goal 3 F-5 Make generalizations from specific information and draw conclusions from general information. Goal 3 F-8 Make connections between an action and its consequences. Goal 4 F-7 Identify and apply practices that preserve and enhance the safety and health of self and others.	TEACH Manual: Vol. I Weather Obstacles, Globe Toss, Weather Report Vol. II Farm Animals Vol. III L-7 Computer Assisted Instruction: Intellipics® Assistive Technology: Intellikeys®



Grades K - 5

Science

Show-Me Standard: SC2 properties and principles of force and motion.

Alternate Framework Standard: FSC-2 Observing and responding to the position, motion, and speed of

objects in the environment, applying principles of force and motion

through using simple tools.

Graduate Goal 8 All graduates will use appropriate means to move within an environment.

Graduate Goal 10 All graduates will participate in their community.

What All Students Should Know W	What All Students Should be Able to Do	Learning Activities
By the end of 5 th grade the student will: Engage in sensory integration and motion/movement activities to orientate body in space. Use the necessary type of force needed to move an object (wheelchair, bike, etc.) Goal pres	the end of 5 th grade the student will: al 1 F-6 Recognize and interpret and make e of patterns and relationships in daily living. al 4 F-2 Follow rules related to socially ceptable behavior and good citizenship. al 4 F-7 identify and apply practices that eserve and enhance the safety and health of f and others.	TEACH Manual: Vol. I Weather The Obstacles Vol. II Circus Match Up, Pumpkin Pudding Vol. III F-19, I-11 Computer Assisted Instruction: Intellipics® Assistive Technology: Intellikeys®



Grades 6 - 8

Science

Show-Me Standard:SC2 properties and principles of force and motion.

Alternate Framework Standard: FSC-2 Observing and responding to the position, motion, and speed of

objects in the environment, applying principles of force and motion

through using simple tools.

Graduate Goal 8 All graduates will use appropriate means to move within an environment.

Graduate Goal 10 All graduates will participate in their community.

What All Students Should Know	What All Students Should be Able to Do	Learning Activities
By the end of 8 th grade the student will: Use mobility devices in the environments (wheelchair, bike, 3 wheel bike). Adjust force and motion to meet daily needs and tasks.	By the end of 8 th grade the student will: Goal 1 F-10 Generalize acquired skills across environments. Goal 3 F-3 Apply strategies developed through personal experience to solve a problem or complete a task. Goal 3 F-6 Participate in activities that provide opportunities for solving problems by developing solutions based on differing perspectives.	TEACH Manual: Vol. I Weather The Obstacles Vol. II Circus Match Up, Pumpkin Pudding Vol. III F-19, I-11 Computer Assisted Instruction: Intellipics® Assistive Technology: IntelliKeys®



Grades 9 - 12

Science

Show-Me Standard:SC2 properties and principles of force and motion.

Alternate Framework Standard: FSC-2 Observing and responding to the position, motion, and speed of

objects in the environment, applying principles of force and motion

through using simple tools.

Graduate Goal 8 All graduates will use appropriate means to move within an environment.

Graduate Goal 10 All graduates will participate in their community.

What All Students Should Know	What All Students Should be Able to Do	Learning Activities
By the end of 12 th grade the student will: Use motor planning through the environment. Adjust force and motion to meet daily needs and tasks. Use spatial relationship for mobility in various environments (obstacles, up/down hill, curb).	By the end of 12 th grade the student will: Goal 1 F-4 Participate in activities using technological tools to locate, select, and organize information. Goal 3 F-3 Apply strategies developed through personal experience to solve a problem or complete a task. Goal 4 F-7 identify and apply practices that preserve and enhance the safety and health of self and others.	TEACH Manual: Vol. I Weather The Obstacles Vol. II Circus Match Up, Pumpkin Pudding Vol. III F-19, I-11 Computer Assisted Instruction: Intellipics® Assistive Technology: IntelliKeys®



Grades K - 5

Show-Me Standard: SC3 characteristics and interactions of living organisms.

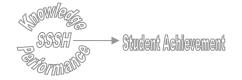
Alternate Framework Standard: FSC-3 Observing and responding to needs and characteristics of living organisms, including skills related to the care of one's self, plants and

animals.

Graduate Goal 3 All graduates will use appropriate means to move within an environment.

Graduate Goal 5 All graduates will participate in their community.

What All Students Should Know	What All Students Should be Able to Do	Learning Activities
By the end of 5 th grade the student will: Recognize hunger and thirst. Express need for various levels of comfort.	By the end of 5 th grade the student will: Goal 1 F-6 Recognize and interpret and make use of patterns and relationships in daily living. Goal 4 F-7 Identify and apply practices that preserve and enhance the safety and health of self and others.	TEACH Manual: Vol. I Pig Out, To Eat or Not, Catching Your Breath Vol. III D-1, M-1 Computer Assisted Instruction: Intellipics® Assistive Technology: IntelliKeys®



Grades 6 - 8

Science

Show-Me Standard: SC3 characteristics and interactions of living organisms.

Alternate Framework Standard: FSC-3 Observing and responding to needs and characteristics of living organisms, including skills related to the care of one's self, plants and animals.

<u>Graduate Goal 3</u> All graduates will use appropriate means to move within an environment. <u>Graduate Goal 5</u> All graduates will participate in their community.

What All Students Should Know	What All Students Should be Able to Do	Learning Activities
By the end of 8 th grade the student will: Recognize nourishment needs of self and others. Express need for various types and levels of comfort.	By the end of 8 th grade the student will: Goal 1 F-6 Recognize and interpret and make use of patterns and relationships in daily living. Goal 4 F-7 Identify and apply practices that preserve and enhance the safety and health of self and others.	TEACH Manual: Vol. I Pig Out, To Eat or Not, Catching Your Breath Vol. III D-1, M-1 Computer Assisted Instruction: Intellipics® Assistive Technology: Intellikeys®



Grades 9 - 12

Science

Show-Me Standard:SC3 characteristics and interactions of living organisms.

Alternate Framework Standard: FSC-3 Observing and responding to needs and characteristics of living

organisms, including skills related to the care of one's self, plants and

animals.

Graduate Goal 3 All graduates will use appropriate means to move within an environment.

Graduate Goal 5 All graduates will participate in their community.

What All Students Should Know	What All Students Should be Able to Do	Learning Activities
By the end of 12 th grade the student will: Express need for various types and levels of comfort.	By the end of 12 th grade the student will: Goal 4 F-7 Identify and apply practices that preserve and enhance the safety and health of self and others.	TEACH Manual: Vol. I Pig Out, To Eat or Not, Catching Your Breath Vol. III D-1, M-1 Computer Assisted Instruction: Intellipics® Assistive Technology: Intellikeys®



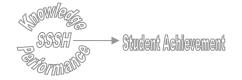
Grades K - 5 Science

Show-Me Standard: SC4 changes in ecosystems and interactions of organisms with their environment.

<u>Alternate Framework Standard</u>: FSC-4 Observing and responding to interactions between self, other living things, and the environment; cares for the environment.

<u>Graduate Goal 4</u> All graduates will use direct observation or personal experience to solve a problem or complete a task.

What All Students Should Know	What All Students Should be Able to Do	Learning Activities
By the end of 5 th grade the student will: Recognize cause and effect.	By the end of 5 th grade the student will: Goal 1 F-3 Participate in activities involving investigation of nature and society. Goal 4 F-3 Participate in activities that promote an understanding of the duties and responsibilities of individuals in society.	TEACH Manual: Vol. II Identify Body Parts, Discriminate Between Objects, First/Last Weather Vol. III F-1, F-3 Computer Assisted Instruction: Intellipics® Assistive Technology: Intellikeys®



Grades 6 - 8

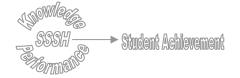
Science

Show-Me Standard: SC4 changes in ecosystems and interactions of organisms with their environment.

<u>Alternate Framework Standard</u>: FSC-4 Observing and responding to interactions between self, other living things, and the environment; cares for the environment.

<u>Graduate Goal 4</u> All graduates will use direct observation or personal experience to solve a problem or complete a task.

What All Students Should Know	What All Students Should be Able to Do	Learning Activities
By the end of 8 th grade the student will: Demonstrate cause and effect in daily life.	By the end of 8 th grade the student will: Goal 1 F-3 Participate in activities involving investigation of nature and society. Goal 4 F-7 Identify and apply practices that preserve and enhance the safety and health of self and others.	TEACH Manual: Vol. III F-38, F-27, F-40 Computer Assisted Instruction: Sammy's Science House® Assistive Technology: Touch Window Intellikeys®



Grades 9 - 12

Science

Show-Me Standard: SC4 changes in ecosystems and interactions of organisms with their environment.

Alternate Framework Standard: FSC-4 Observing and responding to interactions between self, other living things, and the environment; cares for the environment.

<u>Graduate Goal 4</u> All graduates will use direct observation or personal experience to solve a problem or complete a task.



Grades K - 5	Science

Show-Me Standard: SC5 processes (such as plate movement, water cycle, air flow) and interactions of earth's biosphere, atmosphere, lithosphere, and hydrosphere.

Alternate Framework Standard: FSC-5 Identifying natural resources and their uses.

Graduate Goal 3 All graduates will express personal feelings and self-advocate for immediate needs. Graduate Goal 4 All graduates will use direct observation or personal experience to solve a problem or complete a task.

Graduate Goal 5 All graduates will follow an object, picture, symbol, or a written routine.

What All Students Should Know	What All Students Should be Able to Do	Learning Activities
By the end of 5 th grade the student will: Select clothing according to different weather conditions. Identify materials that can be recycled.	By the end of 5 th grade the student will: Goal 1 F-3 Participate in activities involving investigation of nature and society.	TEACH Manual: Vol. I Circus Time, American Cowboy, Pumpkin Pizzazz, Thanksgiving, Fall Vol. III Earth Day, F-27, F-30, F- 32 Computer Assisted Instruction: Just Grandma & Me Assistive Technology: Touch Window IntelliKeys®



Grades Science 6 - 8

Show-Me Standard: SC5 processes (such as plate movement, water cycle, air flow) and interactions of earth's biosphere, atmosphere, lithosphere, and hydrosphere.

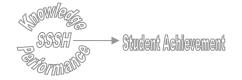
Alternate Framework Standard: FSC-5 Identifying natural resources and their uses.

Graduate Goal 3 All graduates will express personal feelings and self-advocate for immediate needs.

All graduates will use direct observation or personal experience to solve a problem or complete a task.

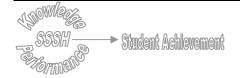
Graduate Goal 5 All graduates will follow an object, picture, symbol, or a written routine.

What All Students Should Know	What All Students Should be Able to Do	Learning Activities
By the end of 8 th grade the student will: Collect recyclable items in various environments.	By the end of 8 th grade the student will: Goal 1 F-3 Participate in activities involving investigation of nature and society.	TEACH Manual: Vol. I Weather Wise, Leaf Lotto Vol. III F-27, F-30, F-32, G-5, H-9 Computer Assisted Instruction: Intellipics® Sammy's Science House® Assistive Technology: IntelliKeys®



		Show-Me Standard:	SC5 processes (such as plate movement, water cycle, air flow) and interactions of earth's biosphere, atmosphere, lithosphere, and hydrosphere.
		Alternate Framewor	rk Standard: FSC-5 Identifying natural resources and their uses.
Grades 9 - 12	Science	Graduate Goal 4 A	All graduates will express personal feelings and self-advocate for immediate needs. All graduates will use direct observation or personal experience to solve a problem or complete a task.
		Graduate Goal 5 A	All graduates will follow an object, picture, symbol, or a written routine.

What All Students Should Know	What All Students Should be Able to Do	Learning Activities
By the end of 12 th grade the student will: Recycle as a money making project.	By the end of 8 th grade the student will: Goal 1 F-10 Generalize acquired skills across environments. Goal 3 F-3 Apply strategies developed through personal experience to solve a problem or complete a task.	TEACH Manual: Vol. I American Eagle Vol. III G-5, Unit: Rocks & Minerals, What is the Environment, Why We Need Land, Why We Need Air, Why We Need Water Computer Assisted Instruction: Intellipics® Assistive Technology: Touch Window IntelliKeys®

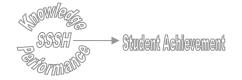


Grades K - 5 **Show-Me Standard**: SC6 composition and structure of the universe and the motions of the object within it

<u>Alternate Framework Standard</u>: FSC-6 Identifying objects in the universe and results of the earth's motion.

<u>Graduate Goal 4</u> All graduates will use direct observation or personal experience to solve a problem or complete a task.

What All Students Should Know	What All Students Should be Able to Do	Learning Activities
By the end of 5 th grade the student will: Recognize repeating patterns occurring in the environment: seasons, day /night, daily.	By the end of 5 th grade the student will: Goal 1 F3 Participate in activities involving investigation of nature and society. Goal 3 F-5 Make generalizations from specific information and draw conclusions from general information.	TEACH Manual: Vol. III A-11, H-4, H-15, I-7 Computer Assisted Instruction: Intellipics® Assistive Technology: IntelliKeys®



Grades 6 - 8

Science

Show-Me Standard: SC6 composition and structure of the universe and the motions of the object within it.

<u>Alternate Framework Standard</u>: FSC-6 Identifying objects in the universe and results of the earth's motion.

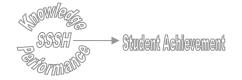
<u>Graduate Goal 4</u> All graduates will use direct observation or personal experience to solve a problem or complete a task.

What All Students Should Know	What All Students Should be Able to Do	Learning Activities
By the end of 8 th grade the student will: Relate repeating patterns occurring in the environment to daily life.	By the end of 8 th grade the student will: Goal 1 F-2 Use information to answer questions and evaluate ideas. Goal 3 F-2 Apply strategies developed through instruction or observation to solve a problem or complete a task.	TEACH Manual: Vol. III A-11, H-4, H-15, I-7 Computer Assisted Instruction: Intellipics® Assistive Technology: Intellilkeys®



		Show-Me Standa	ı rd : SC6 compo	sition and structure of the universe a	nd the motions of the object within it.
Grades	Science	Alternate Frame	vork Standard:	FSC-6 Identifying objects in the unimotion.	verse and results of the earth's
9 - 12	Graduate Goal 4	All graduates complete a ta	will use direct observation or person ask.	al experience to solve a problem or	
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What All Students Should Know	What All Students Should be Able to Do	Learning Activities
By the end of 12 th grade the student will: Recognize repeating patterns occurring in the environment to daily living.	By the end of 12 th grade the student will: Goal 1 F-4 Participate in activities using technological tools to locate, select, and organize information. Goal 3 F-1 Use a mode of communication to indicate that a problem exists and/or explain or define the problem. Goal 3 F-7 Select an appropriate strategy to address a problem or complete a task.	TEACH Manual: Vol. I Weather Vol. II Thanksgiving, Time for Safety Computer Assisted Instruction: Intellipics® Assistive Technology: Telescope Intellikeys®



Grades Science K - 5

Show-Me Standard: SC7 processes of scientific inquiry (such as formulating and testing hypothesis).

Alternate Framework Standard: FSC-7 Using observations and measurement to answer questions.

Graduate Goal 1 All graduates will communicate.

Graduate Goal 4 All graduates will use direct observation or personal experience to solve a problem or complete a task.

What All Students Should Know

By the end of 5th grade the student will:

Recognize the scale/size of an item.

Select the correct amount needed.

Recognize different properties of matter (heavy/light, smooth/rough, hard/soft).

What All Students Should be Able to Do

By the end of 5th grade the student will:

Goal 1 F-1 Ask questions to gain information or explore ideas.

Goal 3 F-8 Make connections between an action and its consequences.

Learning Activities

TEACH Manual:

Vol. I Leaf Lotto

Vol. II College Science Graph

Vol. III H-6, I-3, I-5, L-7

Computer Assisted Instruction:

Millie's Math House®

Assistive Technology:

Touch Window® IntelliKeys® Switch **Joystick**



Grades Science 6 - 8

Show-Me Standard:SC7 processes of scientific inquiry (such as formulating and testing hypothesis).

Alternate Framework Standard: FSC-7 Using observations and measurement to answer questions.

Graduate Goal 1 All graduates will communicate.

Graduate Goal 4 All graduates will use direct observation or personal experience to solve a problem or complete a task.

What All Students Should Know	What All Students Should be Able to Do	Learning Activities
By the end of 8 th grade the student will: Understand the relationship between the scale/size of an item and a specific item.	By the end of 8 th grade the student will: Goal 1 F-2 Use information to answer questions and evaluate ideas. Goal 1 F-6 Recognize and interpret and make use of patterns and relationships in daily living.	TEACH Manual: Vol. I Rainbow, Winter Clothes Vol. III C-9, D-3 Computer Assisted Instruction: Intellipics® Assistive Technology: Intellikeys®



Grades 9 - 12 Science

Show-Me Standard:SC7 processes of scientific inquiry (such as formulating and testing hypothesis).

<u>Alternate Framework Standard</u>: FSC-7 Using observations and measurement to answer questions.

Graduate Goal 1 All graduates will communicate.

Graduate Goal 4 All graduates will use direct observation or personal experience to solve a problem or complete a task.

What All Students Should Know	What All Students Should be Able to Do	Learning Activities
By the end of 12 th grade, the student will: Understand the relationship between the scale/size of an item and a specific item.	By the end of 12 th grade, the student will: Goal 3 F-8 Make connections between an action and its consequences.	TEACH Manual: Vol. I Colored Ice, Seasons Cabob Vol. III C-5, D-78 Computer Assisted Instruction: Think'n Things® Sammy's Science House® Assistive Technology: Touch Window® IntelliKeys® Switch Joystick



Grades	Science
K - 5	

Show-Me Standard: SC8 impact of science, technology, and human activity on resources and the environment.

<u>Alternate Framework Standard</u>: FSC-8 Using technology and natural resources responsibly; cares for the environment.

Graduate Goal 4 All graduates will use direct observation or personal experience to solve a problem or complete a task.

Graduate Goal 5 All graduates will follow an object, picture, symbol, or a written routine.

What All Students Should Know	What All Students Should be Able to Do	Learning Activities
By the end of 5 th grade the student will: Recognize household appliances by form and function. Implement basic conservation strategies.	By the end of 5 th grade the student will: Goal 1 F-4 Participate in activities using technological tools to locate, select, and organize information. Goal 1 F-8 Participate in activities involving organizing information into useful forms. Goal 4 F-7 Identify and apply practices that preserve and enhance the safety and health of self and others.	TEACH Manual: Vol. II Time for Safety, American Cowboy, Circle Time Vol. III A-1, F-38, M-6 Computer Assisted Instruction: Intellipics® Assistive Technology: Intellikeys®



Grades	Science
6 - 8	

Show-Me Standard: SC8 impact of science, technology, and human activity on resources and the environment.

<u>Alternate Framework Standard</u>: FSC-8 Using technology and natural resources responsibly; cares for the environment.

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Graduate Goal 5 All graduates will follow an object, picture, symbol, or a written routine.

What All Students Should Know	What All Students Should be Able to Do	Learning Activities
By the end of 8 th grade the student will: Recognize household appliances by form and function. Implement basic conservation strategies.	By the end of 8 th grade the student will: Goal 1 F-10 Generalize acquired skills across environments. Goal 3 F-8 Make connections between an action and its consequences. Goal 4 F-7 Identify and apply practices that preserve and enhance the safety and health of self and others.	TEACH Manual: Vol. I American Flag, Fall, Winter, Colors Vol. II American Cowboy, Time for safety Vol. III K-3 Computer Assisted Instruction: Intellipics® Assistive Technology: IntelliKeys®



Grades Science 9 - 12

Show-Me Standard: SC8 impact of science, technology, and human activity on resources and the environment.

<u>Alternate Framework Standard</u>: FSC-8 Using technology and natural resources responsibly; cares for the environment.

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Graduate Goal 5 All graduates will follow an object, picture, symbol, or a written routine.

What All Students Should Know	What All Students Should be Able to Do	Learning Activities
By the end of 12 th grade the student will: Recognize household appliances by form and function. Implement basic conservation strategies.	By the end of 12 th grade the student will: Goal 1 F-8 Participate in activities involving organizing information into useful forms. Goal 3 F-8 Make connections between an action and its consequences. Goal 4 F-7 Identify and apply practices that preserve and enhance the safety and health of self and others.	TEACH Manual: Vol. II Time for Safety, Pumpkin Pizzazz, Thanksgiving Vol. III A-9, B-8, F-36, F-38, G-5 Computer Assisted Instruction: Millie's Math House® Kid Pix Studio® Intellipics® Assistive Technology: Touch Window® IntelliKeys® Switch Joystick

